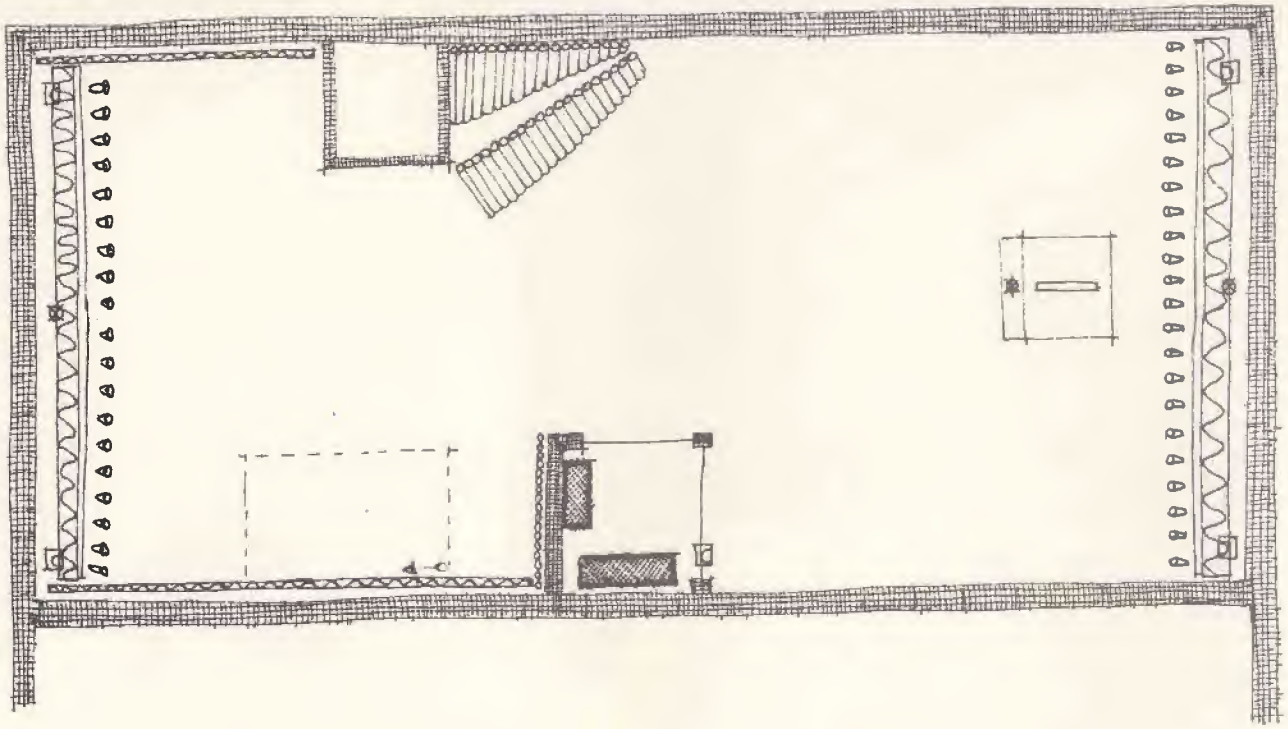
WITH A CONCERN FOR AN AESTHETIC INTERACTION OF THE COMPUTER AND SOCIETY, PULSA IS INVOLVED IN OPEN-ENDED RESEARCH OF ENVIRONMENTAL ART BASED ON THE CONTROL OF PERCEPTIBLE WAVE ENERGIES. RESEARCH HAS FOCUSED ON ABSTRACT TIME-EXTENDED PHENOMENA ARTICULATED BY PLASTICALLY CHANGING PRESENCES OF LIGHT AND SOUND.

PULSA IS INTERESTED IN THE DESIGN AND REALIZATION OF PUBLIC EXHIBITIONS IN NATURAL AND MAN MADE ENVIRONMENTS, IN INCREASING AWARENESS OF THE SYSTEMS AND TECHNOLOGIES THAT CHARACTERIZE AND CHANGE THE WORLD ENVIRONMENT, AND IN ENRICHING IT BY GENERATING NEW PHENOMENA AND MEANINGFUL EXPERIENCE.

LABORATORY PERIOD IN THE LOFT : FALL - WINTER 1967

EQUIPMENT WAS GATHERED, TESTED AND AUGMENTED. INCANDESCENT LIGHTS WERE REPLACED BY BANKS OF FLUORESCENT BULBS AND THE ORGINAL TAPE SYSTEM WAS REPLACED BY AN ELECTRONIC SIGNAL GENERATOR ABLE TO CREATE ITS OWN SIGNALS. RIPPLING FIELDS OF LIGHT FOLDING AND UNFOLDING AT VARIOUS INTERVALS IN A DARK ROOM WERE PERIODICALLY PUNCTUATED BY ABRUPT FLASHES OF STROBE LIGHT. THOUGH ALL THE LIGHTS WERE WHITE, PROLONGED EXPOSURE PRODUCED THE IMAGE OF A SPECTRUM OF PASTEL COLORS. THE DIVERSE SOUND PATTERNS RELATED BUT DID NOT DIRECTLY REFLECT THE RYTHMS OF THE LIGHTS. THE EXHIBITION LASTED AS LONG AS ONE WANTED TO STAY; AUDIENCES REMARKED THAT AFTER THE FIRST HALF HOUR IT BECAME INCREASINGLY DIFFICULT TO SEPARATE THEMSELVES FROM THE ENVIRONMENT.



1.5M / 5FT SCALE

STAIRS DOWN

SPEAKER

STROBE

FLUORESCENT

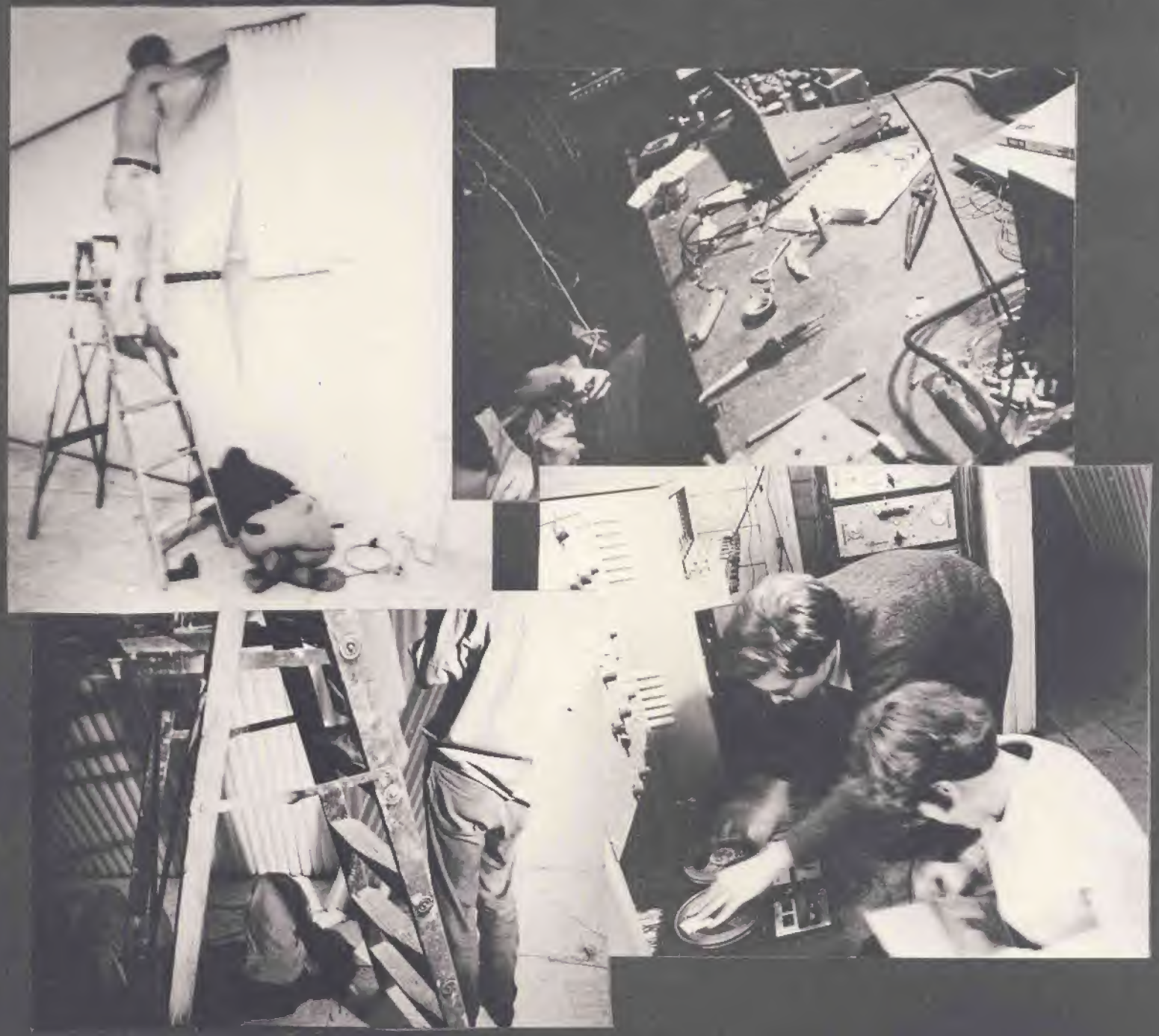
CONTROL

MYLAR

STRUCTURE

PULSA INSTALLATION – RESEARCH STUDIO – NEW HAVEN – 1967 – 1968

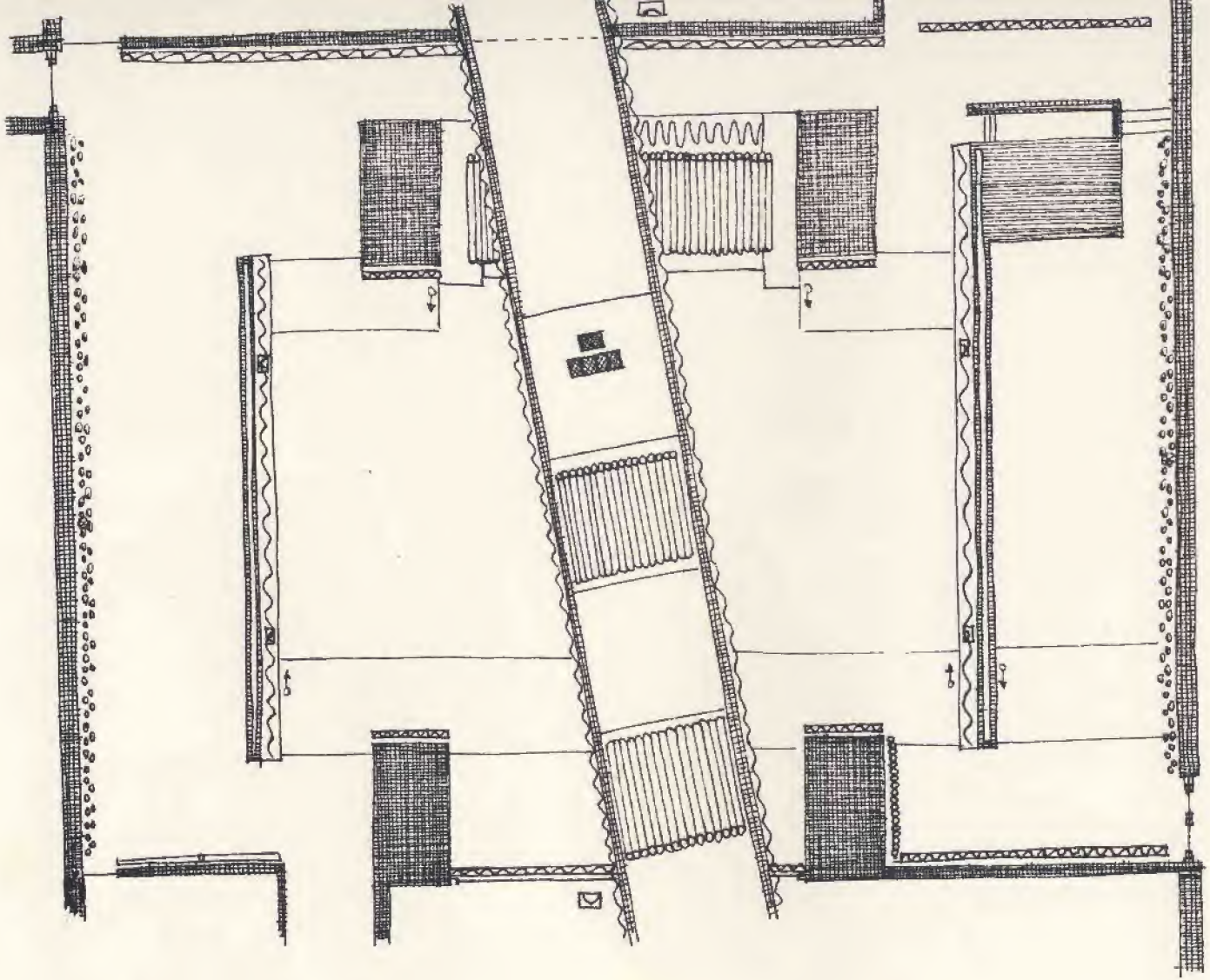
CONSTRUCTION OF THE FLUORESCENT WALLS ; ELECTRONICS AND PROGRAMMING EQUIPMENT .



THIRTY SECONDS

PUBLIC SHOWING, YALE SCHOOL OF ART AND ARCHITECTURE : SPRING - FALL 1968

THIS INSTALLATION REALIZED A MORE FULLY DEVELOPED VERSION OF THE LOFT EXPERIMENTS AND CHANGED OCCASIONALLY DURING THE EXHIBITION PERIOD. A COMPLEX AND OFTEN ILLUSORY SPACE WAS CONSTRUCTED OF MYLAR PANELS AND WALLS OF FLUORESCENT LIGHT UTILIZING OVER ONE THOUSAND BULBS FOR WHICH A SPECIAL EPOXY CAPPING TECHNIQUE WAS DEVISED TO PROVIDE BOTH ELECTRICAL CONTACT AND STRUCTURAL SUPPORT. AT THIS TIME THE COMPLEX CONTROL SYSTEM WAS DEVELOPED, INCORPORATING COMPUTER ELEMENTS WITH CIRCUITRY THAT GENERATED DIGITAL SWITCHING AND SIGNAL SEQUENCES VARIABLE IN BOTH FREQUENCY AND AMPLITUDE. THE SIGNALS COULD BE FIXED AND PROGRAMMED TO REPEAT THEMSELVES IN ANY DESIRED TIME INTERVAL AND A NUMBER OF PROGRAMS COULD RUN SIMULTANEOUSLY.



1.5M / 5 FT. SCALE

RAMP DOWN

SPEAKER

STROBE

FLUORESCENT

CONTROL

MYLAR

STRUCTURE

PULSA INSTALLATION - SCHOOL OF ART & ARCHITECTURE - YALE UNIVERSITY - APRIL to SEPTEMBER 1968

DESIGN AND CONSTRUCTION OF ADVANCED SIGNAL AND SOUND SYNTHESIZER ,
AMPLIFIERS AND ASSOCIATED ELECTRONIC EQUIPMENT .

CONSTRUCTION OF EXHIBITION INSTALLATION

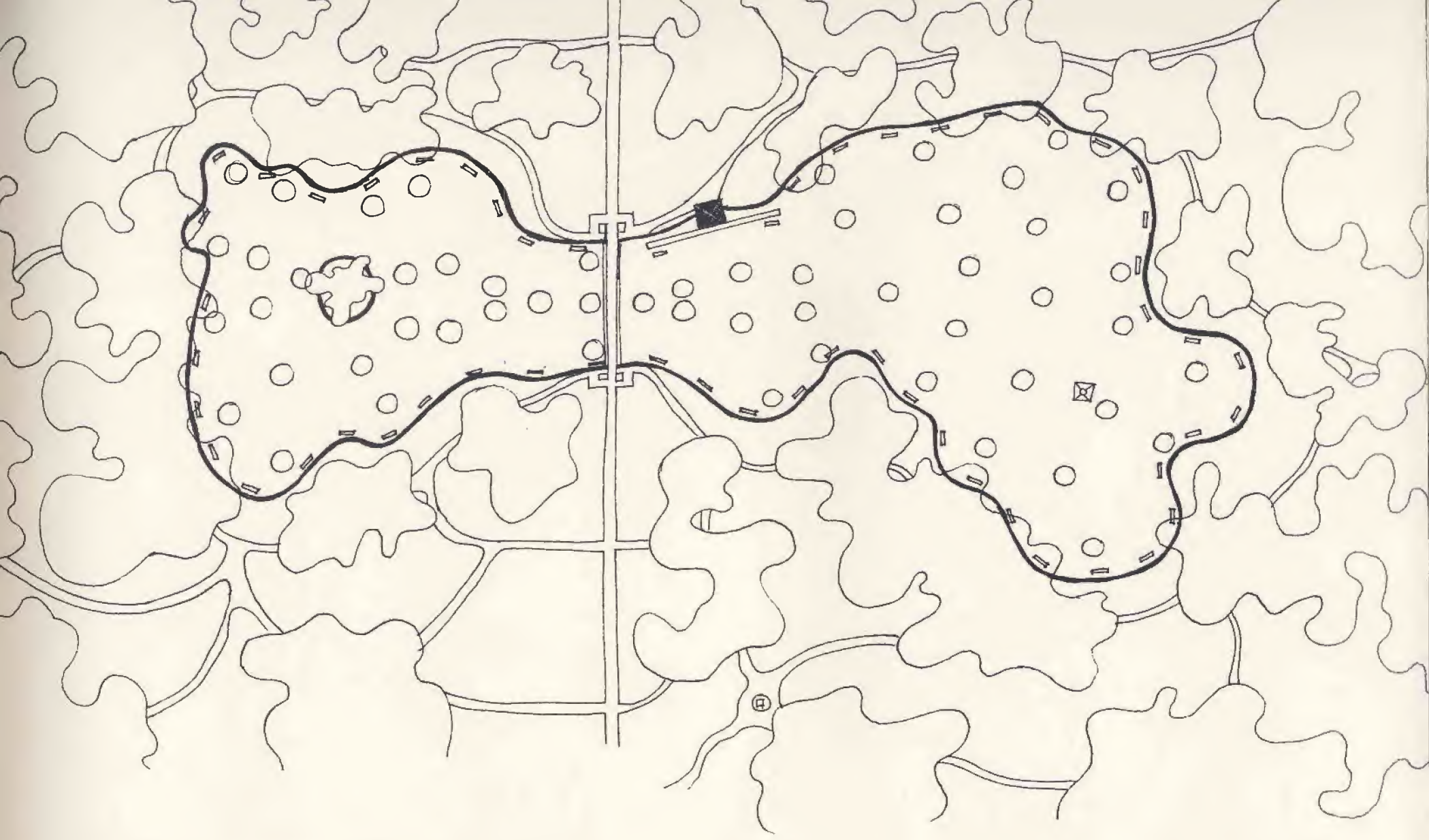
PROGRAMMING CONTROL CENTER DURING EXHIBITION.

VIEW OF ONE AREA IN THE EXHIBITION SPACE SHOWING DISTRIBUTION OF LIGHT AT TWO MOMENTS .

VIEW ACROSS SPACE DURING EXHIBITION

PROGRAMMED ENVIRONMENT, BOSTON PUBLIC GARDEN: OCTOBER 8-27, 1968

THE FOUR ACRE SWAN BOAT POND WAS ACTIVATED BY FIFTY-FIVE XENON STROBE-LIGHTS PLACED UNDER THE SURFACE OF THE WATER AND FIFTY-TWO POLY PLANAR SPEAKERS, PROGRAMMED BY A SIGNAL SYNTHESIZER, A PUNCHED PAPER TAPE READER AND MAGNETIC TAPE. THE PROGRAM BEGAN AT DUSK TO USE THE CHANGING AMBIENCE OF THE SUNSET. IN THE DARKNESS ONE SAW FLASHES OF LIGHT AND HEARD BRIEF INTERVALS OF SOUND WHIPPING OVER THE WATER'S SURFACE AT RATES UP TO THREE HUNDRED MILES PER HOUR, SIMILAR TO SKIPPING STONES WHOSE DIRECTION, PATTERN AND RHYTHM WERE CAPABLE OF ENDLESS MODULATION. WHILE IT WAS CLEAR THAT PATHS OF THESE FLASHES DESCRIBED A LINE OF SOME KIND, IT WAS IMPOSSIBLE TO RECONSTRUCT A LINEAR CONFIGURATION OF ANY ENDURING OR ANALYZABLE PARTICULARITY. THE SOUND-LIGHT RYTHMS WERE PERVASIVE, ELUSIVE, AND NON-RELATIONAL.



PULSA INSTALLATION - BOSTON PUBLIC GARDEN POND - OCTOBER 1968

PREPARATION: PLANNING, CONSTRUCTION AND PUBLIC RELATIONS.

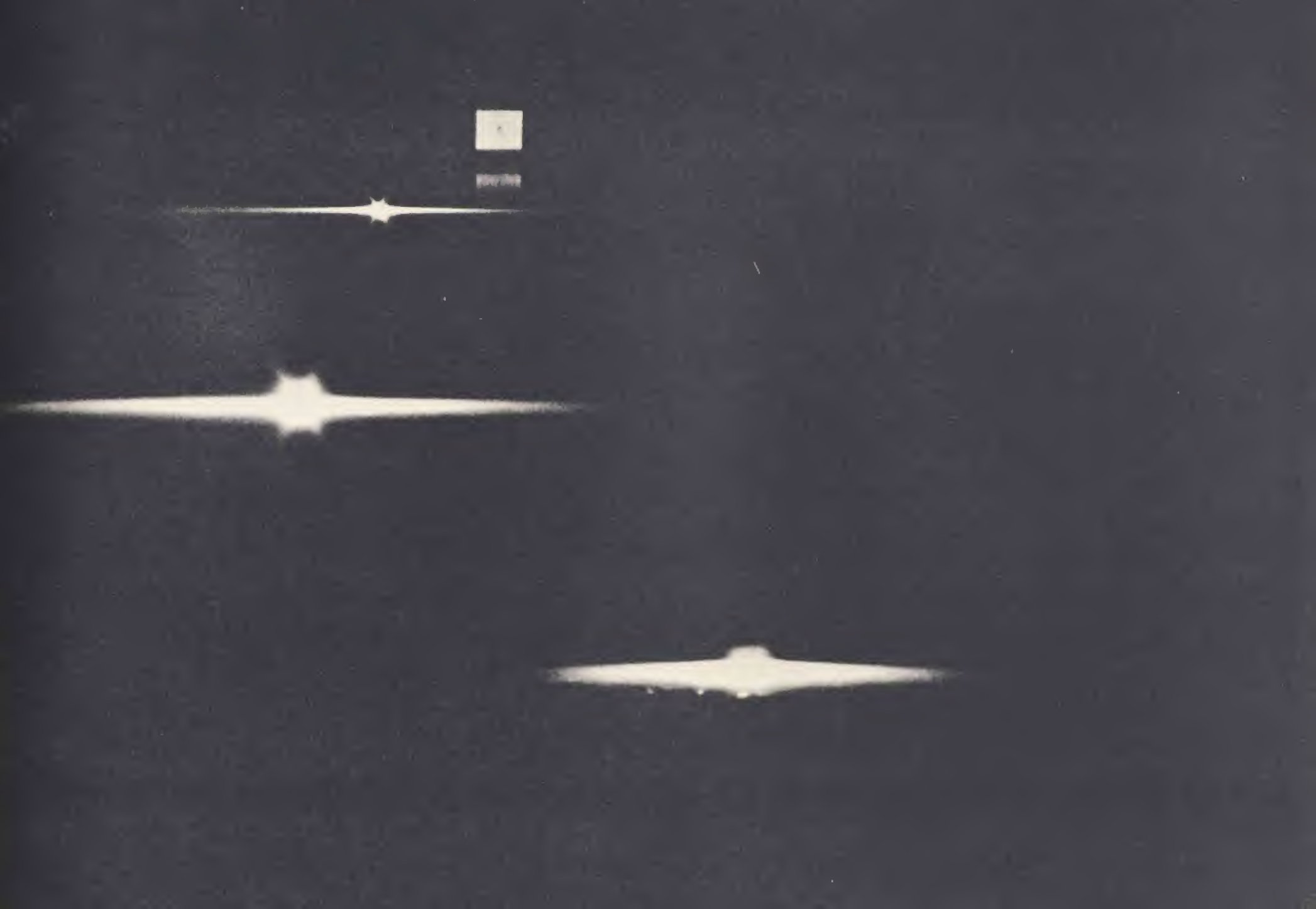
INSTALLATION OF LIGHTS, SPEAKERS AND CONTROL EQUIPMENT.

CITY OF BOSTON, SHOWING THE PUBLIC GARDEN POND AT LEFT CENTER.

ELEVATED VIEW OF POND DURING EXHIBITION .

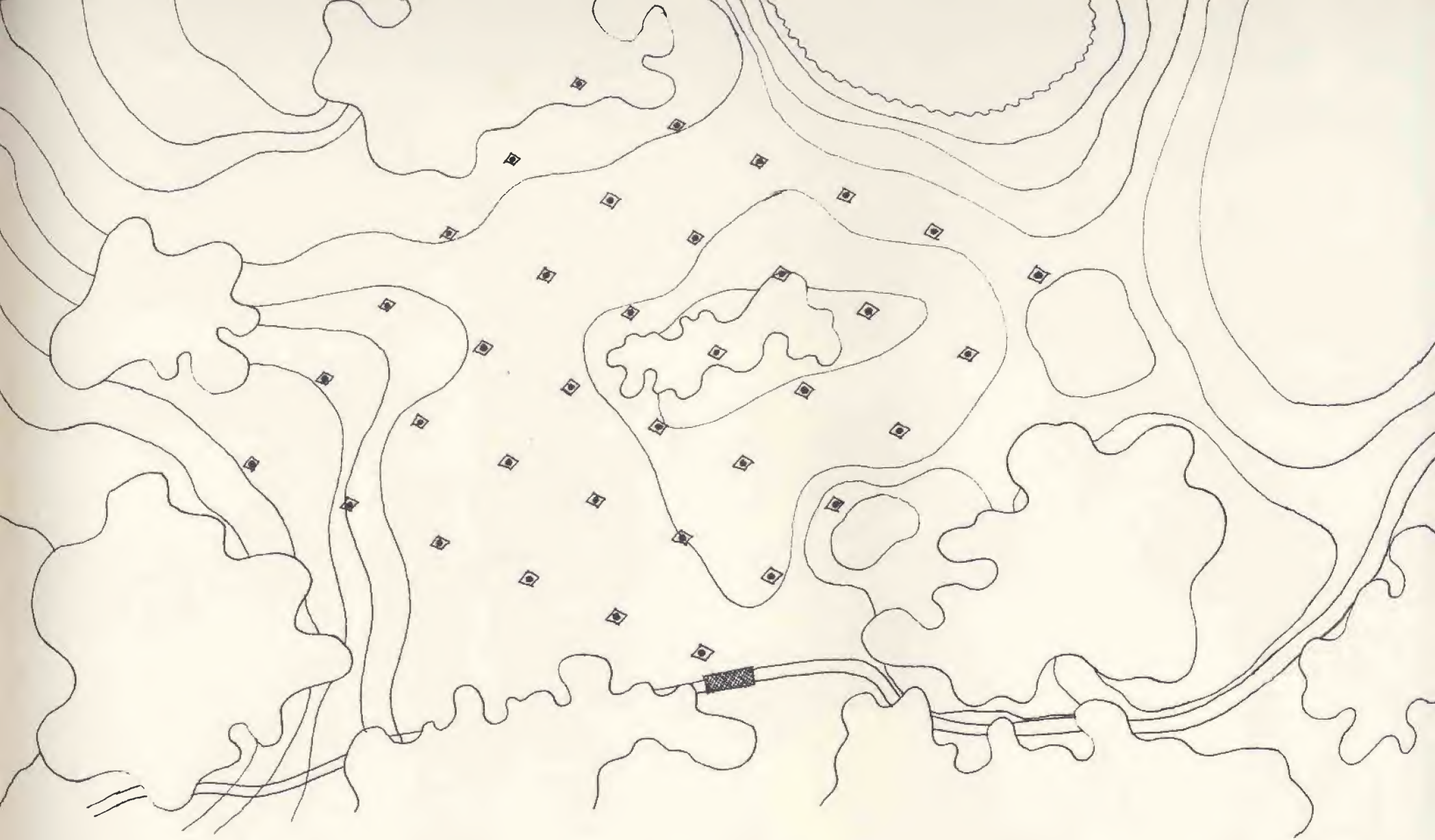
VIEW FROM PARK ACROSS POND WITH CITY LIGHTS IN THE DISTANCE .

VIEW ACROSS POND : UNDERWATER STROBE LIGHTS AND SPEAKER AT POND'S EDGE .



RESEARCH PERIOD , YALE GOLF COURSE : WINTER 1969

A VARIETY OF EXPERIMENTAL SOUND-LIGHT MATRICES WERE REALIZED AND EVALUATED , USING THE STROBE-SPEAKER SYSTEM FROM BOSTON IN ASSOCIATION WITH THE EXISTING CONTROL SYSTEM . PROGRAMMING CAPABILITY WAS AT THIS TIME EXPANDED BY THE ADDITION OF A DIGITAL COMPUTER AND A TELETYPE . ONE CONFIGURATION INVESTIGATED THE POSSIBILITIES OF PHASING SITUATIONS WITH TWO SOUND-LIGHT LINES SKITTERING BACK AND FORTH ACROSS THE WINTER LANDSCAPE . ANOTHER ARRANGEMENT WAS AN ISOMETRIC GRID MATRIX OF FIVE HUNDRED BY EIGHT HUNDRED FEET WHICH PROVIDED , WITH THE COMPUTER , THE OPPORTUNITY TO RESEARCH INCREASINGLY COMPLEX ACTIVITY OF LIGHT-SOUND ENERGY FIELDS AS WELL AS EXTENDED LINEAR OVERLAY PROGRAMS .



PULSA INSTALLATION – YALE GOLF COURSE – NEW HAVEN – JANUARY – MARCH 1969

PRELIMINARY DESIGN AND INSTALLATION RITUAL .

PROGRAMMING: RESOLUTION OF AN IDEA. MOVING CLOCKWISE FROM UPPER LEFT: DISCUSSION, NUMERICAL TRANSCRIPTION OF LIGHT AND SPEAKER POSITION FROM SITE PLAN, TELETYPE WRITEIN TO THE COMPUTER, COMPUTER INTERACTION, PUNCHED PAPER TAPE TRANSLATION OF THE PROGRAM, PUNCHED PAPER TAPE READER AND DECODER OUTPUT OF INFORMATION TO ENVIRONMENT.


GENERAL AUTOMATION, INC.

ONETHOUSAND-FOOT INSTALLATION OF A SINGLE LINE OF STROBE LIGHTS WITH PARALLEL LINES OF FLASING HIGHWAY LIGHTS .

LARGE MATRIX INSTALLATION AT DUSK

TWO PARALLEL LINES OF FOG-BOUND STROBE LIGHTS IN THE FOREST .

OVERALL VIEW OF THE MATRIX INSTALLATION DURING A TWO MINUTE PERIOD .

OVERALL VIEW OF MATRIX INSTALLATION WITH CITY LIGHTS IN DISTANCE .

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